

**WE CLAIM:**

1. A method for redistributing software packages in a distributed computer network after a failed, original distribution attempt, the distributed computer network including a master device adapted for initiating  
5 the original distribution attempt, a plurality of intermediate distribution devices for distributing the software packages as instructed by the master device, and a plurality of recipient network devices, the method comprising:

10 determining one of the intermediate distribution devices affected by the failed original distribution attempt;

identifying a distribution job that failed at the affected intermediate distribution device;

15 retrieving distribution parameters from the affected intermediate distribution device comprising distribution control commands received from the master device during the original distribution attempt;

20 building new distribution commands for the failed distribution job from the retrieved distribution parameters; and

performing a redistribution of a set of software packages from the affected intermediate distribution device based on the new distribution commands.

2. The method of claim 1, further including retrieving from the affected intermediate distribution device the set of software packages from a log file for the failed distribution job.

3. The method of claim 1, further including creating a user interface, displaying the new distribution commands on the user interface, and

receiving approval input for the new distribution  
5 commands prior to the performing.

4. The method of claim 1, wherein the identifying,  
the distribution parameters retrieving, and the new  
distribution commands are performed automatically by a  
redistribution tool running on the affected intermediate  
5 distribution device.

5. The method of claim 4, further including after  
the determining, calling the redistribution tool over a  
communications network to execute on the affected  
intermediate distribution device.

6. The method of claim 4, wherein the  
redistribution performing is completed by a distribution  
manager running on the affected intermediate distribution  
device and the redistribution performing includes  
5 transmitting the new distribution commands from the  
redistribution tool to the distribution manager.

7. The method of claim 1, wherein the determining  
comprises accessing and searching records of failed  
distribution files storing information parsed from error  
alert messages generated within the distributed computer  
5 network.

8. The method of claim 7, further including after  
the redistribution performing, updating the failed  
distribution files to remove information corresponding to  
the failed distribution job at the affected intermediate  
5 distribution device.

9. The method of claim 1, wherein the distribution  
parameters retrieving further includes retrieving a  
distribution list for the failed distribution job and

wherein the new distribution commands building includes  
5 creating a distribution list for use in the  
redistribution identifying the recipient network device  
that are to receive the set of software.

10. A computer system for distributing software in  
a distributed computer network having a plurality of  
intermediate distribution servers and end user devices  
communicatively-linked to a data communications network,  
5 comprising:

a master network device linked to the communications  
network and adapted for transmitting a distribution job  
for a set of software packages to select ones of the  
intermediate distribution servers, wherein the  
10 distribution job includes distribution data comprising a  
distribution list of the end user devices and  
distribution parameters including instructions on how to  
install the software packages; and

a redistribution tool configured for retrieving the  
15 distribution parameters and the distribution list from an  
affected one of the selected intermediate distribution  
servers that failed to complete the distribution job, for  
building commands for a redistribution of the  
distribution job from the retrieved distribution  
20 parameters and the distribution list, and issuing the  
redistribution commands to a distribution manager running  
on the affected intermediate distribution server to cause  
initiation of a redistribution job.

11. The computer system of claim 10, wherein the  
affected intermediate distribution server includes a log  
file for the failed distribution job and the  
redistribution tool automatically accesses and searches  
5 the log file to retrieve the distribution parameters and  
the distribution list for the failed distribution job.

12. The computer system of claim 11, wherein the log file further includes a list of the software packages for the failed distribution job and the redistribution tool retrieves the list and includes the list in the redistribution commands.

13. The computer system of claim 10, wherein the redistribution tool includes an interface manager configured for generating an interactive user interface at the affected intermediate distribution server to display the redistribution commands and to receive approval input from an operator prior to the issuing of the redistribution commands.

14. The computer system of claim 10, wherein the redistribution tool is maintained on a server linked to the communications network and is called from the affected intermediate distribution server to execute on the affected intermediate distribution server.

15. A software distribution method, comprising:  
performing an initial distribution of a set of software applications over a data communications network including transmitting a distribution list, distribution commands, and the software applications to intermediate servers for further distribution of the software applications to end user devices;

receiving an error alert message indicating a failure at an affected one of the intermediate servers to complete the initial distribution;

automatically building a job ticket based on the error alert message and transmitting the job ticket over the communications network to a maintenance center to initiate correction of a problem underlying the failure at the affected intermediate server;

after the underlying problem has been corrected,  
running a redistribution tool on the affected  
intermediate server to automatically generate a set of  
redistribution commands; and

20 performing a redistribution of the software  
applications from the affected intermediate server based  
on the redistribution commands.

16. The method of claim 15, wherein the  
redistribution tool running includes identifying the  
failed initial distribution on the affected intermediate  
server, retrieving a copy of the distribution commands  
5 for the failed initial distribution stored by the  
affected intermediate server, and using the retrieved  
distribution commands in the generation of the  
redistribution commands.

17. The method of claim 16, wherein the  
redistribution tool running further includes displaying  
the redistribution commands at the affected intermediate  
server, querying for an approval of the displayed  
5 redistribution commands, and if approval received,  
issuing the redistribution commands to a distribution  
manager of the affected intermediate server to initiate  
the redistribution performing.

18. A computer service method for selectively  
creating job tickets in response to error alerts, the  
error alerts being created during package distribution on  
5 a computer network comprising a plurality of network  
devices and including information related to package  
distribution failure, the method comprising:

receiving an error alert;  
processing the error alert to identify a failure  
10 type from the failure information;

updating an error tracking file comprising tracking values for each of the failure types to incrementally change a tracking number for the identified failure type;

15 comparing the updated tracking value for the identified failure type to a threshold limit for the identified failure type to determine if the threshold limit is exceeded; and

when the comparing determines the threshold limit is exceeded, creating a job ticket including at least a  
20 portion of the failure information from the error alert to initiate service in the computer network.

19. The method of claim 18, wherein the threshold limits are predetermined and stored in memory accessible during the comparing and wherein the threshold limits are selected to differ for at least some of the failure  
5 types.

20. The method of claim 18, further including running a redistribution tool on a one of the network devices determined to have failed to complete the package distribution to automatically generate a set of  
5 redistribution commands and performing a redistribution of software applications contained in the package distribution from the affected intermediate server based on the redistribution commands.

21. The method of claim 20, wherein the redistribution tool running includes identifying the failed package distribution on the affected, failed network device, retrieving a copy of distribution  
5 commands for the failed package distribution stored by the affected network device, and using the retrieved distribution commands in the generation of the redistribution commands.

22. The method of claim 18, wherein the error alert processing further includes retrieving identification data on a network device affected by the package distribution failure, the method further includes  
5 determining with the identification data whether the affected network device is included on an outage list, and further wherein the job ticket creating is not completed when the affected network device is determined to be included on the outage list.

23. The method of claim 18, wherein the error alert processing further includes retrieving identification data on a network device affected by the package distribution failure and further wherein the tracking  
5 values for each of the failure types are included in the error tracking file for each of the network devices.

24. The method of claim 23, wherein the threshold limits are selectable for each of the network devices.

25. The method of claim 18, wherein the error alert processing further includes retrieving location information for a network device affected by the package distribution failure for use in the job ticket creating,  
5 and further wherein the method includes matching the retrieved location information with device location information stored in memory and when a match is not achieved, modifying the retrieved location information to match the device location information.

26. The method of claim 18, further including processing the error alert to retrieve location information for the network device affected by the package distribution failure, determining a job ticket

- 5 recipient from a set of network maintenance centers based on the location information, and transmitting the created job ticket to the job ticket recipient.

27. The method of claim 26, wherein the job ticket is an e-mail message and the transmitting uses a data communications network, and further wherein the transmitting comprises verifying whether the transmitting  
5 was completed and if not successful, repeating the transmitting a predetermined retry value.